SARI

GEOLOGI, ALTERASI, DAN MINERALISASI DAERAH CURAHTAKIR DAN SEKITARNYA, KECAMATAN TEMPUREJO, KABUPATEN JEMBER, PROVINSI JAWA TIMUR

Dedi Kurniawan

Daerah penelitian berada pada Kecamatan Tempurejo, Kabupaten Jember, Provinsi Jawa Timur. Secara geografis daerah penelitian terletak pada koordinat 113^{o} 30’ mE – 113^{o} 45’ mE dan 8^{o} 00’ mN – 8^{o} 30’ mN dengan luas wilayah 15km^{2}. Daerah penelitian secara fisiografis merupakan bagian dari Zona Pegunungan Selatan yang terdiri atas batuan berumur Tersier, Geomorfologi Kecamatan Tempurejo dan sekitarnya di interpretasikan terdapat aktivitas gunung api purba yang dapat diketahui dengan adanya morfologi perbukitan melingkar (*circular feature*) yang terletak sekitar 2 km di barat laut dan timur laut daerah penelitian. Satuan geomorfologi pada daerah penelitian dibagi menjadi 2 satuan, yaitu Satuan Kawah Gunungapi Purba Suco dan Satuan Perbukitan Sisa Gunungapi Purba Curahtakir. Pada daerah penelitian terdapat 4 struktur geologi yang diperkirakan, yaitu Sesar Mendatar Kiri CT-1 yang berarah timur laut – barat daya (NE-SW), Sesar Mendatar Kiri CT-2 yang berarah timur laut – barat daya (NE-SW), Sesar Mendatar Kiri CT-3 yang berarah timur laut – barat daya (NE-SW), dan Sesar Mendatar Kanan SC-1 yang berarah barat laut – tenggara (NW-SE). Stratigrafi daerah penelitian dikelompokkan menjadi 7 satuan batuan, dari tua ke muda, yaitu Satuan Breksi Vulkanik, Satuan Endapan Tuf, Satuan Intrusi Dasit, Satuan Breksi Monomik, Satuan Intrusi Diorit, Satuan Lava Andesit Porfiri, dan Satuan Lava Andesit. Seluruh daerah penelitian telah mengalami alterasi hidrotermal dengan intensitas lemah hingga intensif. Zona Alterasi pada daerah penelitian terbagi menjadi 6 zona, yaitu: zona pirofilit – dikit, kaolinit, illit, muskovit, Fe-Mg klorit, dan Mg klorit. Alterasi hidrotermal pada daerah penelitian terbentuk pada pH fluida bersifat asam-netral dengan temperature pembentukan mineral berkisar dari 140^{o} – 260^{o} C. Mineralisasi yang berupa mineral pirit hadir secara tersebar (*disseminated*) dan sebagai matriks dalam ukuran halus (*fine grained sulphides*). Sistem endapan yang terdapat pada daerah penelitian diperkirakan sebagai endapan tipe epitermal sulfidasi tinggi (*high sulphidation*) berdasarkan kehadiran tekstur pola mineralisasi yang menyebar, serta kehadiran mineral alunit, pirofilit dan dikit.

Kata kunci: alterasi, mineralisasi, epitermal sulfidasi tinggi

ABSTRACT

GEOLOGY, ALTERATION, DAN MINERALIZATION AT CURAHTAKIR AND ITS SURROUNDING AREA, TEMPUREJO DISTRICT, JEMBER REGENCY, EAST JAVA PROVINCE

Dedi Kurniawan

The research area is located at Tempurejo District, Jember Regency, East Java Province. Geographically located on 113^{o} 30' mE – 113^{o} 45' mE dan 8^{o} 00' mN – 8^{o} 30' mN, within 15km^{2} area. The research area based on its physiography is a part of Southern Mountain Zone which is composed of Tertiary rocks. Geomorphology of Tempurejo District and its surrounding area is interpreted as an ancient volcano activity that could be known by its circular morphology called (circular feature) which is located about 2 km northwest and northeast ward of the research area. Geomorphology of research area are divided into 2 unit, which are Ancient Volcano Crater Hills Unit Suco and Ancient Volcano Remaining Hills Unit Curahtakir. At the research area, there are 4 interpreted geological structures, which are Left Strike Slip Fault CT-1 with northeast to southwest trending (NE-SW), Left Strike Slip Fault CT-2 with northeast to southwest trending (NE-SW), Left Strike Slip Fault CT-3 with northeast to southwest trending (NE-SW), dan Right Strike Slip Fault SC-1 with northwest to southeast trending (NW-SE). Stratigraphy of the research area consists of 7 lithological units, from old to young, which are Volcanic Breccia Unit, Tuff Deposition Unit, Dacite Intrusion Unit, Monomict Breccia Unit, Diorite Intrusion Unit, Porphyry Andesite Lava Unit, Andesite Lava Unit. Overall research area had been altered by hydrotermal with weak to intensive intensity. Alteration zone of the research area divided into 6 zones, which are Pyrophyllite – Dickite zone, Kaolinite zone, Illite zone, Muscovite zone, Fe-Mg Chlorite zone, and Mg Chlorite zone. Hydrothermal alteration on research area formed at acid to netral fluid pH range with temperature range from 140^{o} – 260^{o} C. Mineralization in the form of pyrite present in disseminated pattern and fine grained sulphides as matrix. Ore bearing system of the research area could be classified as high sulphidation epitermal type based on disseminated mineralization pattern, and also the presence of pyrophyllite and dickite.

Keyword: alteration, mineralization, high sulphidation epithermal